

**199—15.10 (476) Standards for interconnection, safety, and operating reliability.** For purposes of this rule, “electric utility” or “utility” means both rate-regulated and non-rate-regulated electric utilities.

**15.10(1) *Acceptable standards.*** Qualifying facilities and AEP facilities shall meet the applicable provisions in the publications listed below in order to be eligible for interconnection to an electric utility system:

- a.* General Requirements for Synchronous Machines, ANSI C50.10-1990.
- b.* IEEE Standard for Salient-Pole 50 Hz and 60 Hz, Synchronous Generators and Generator/Motors for Hydraulic Turbine Applications Rated 5 MVA and above, IEEE C50.12-2005.
- c.* IEEE Standard for Cylindrical-Rotor 50 Hz and 60 Hz, Synchronous Generators Rated 10 MVA and above, IEEE C50.13-2005.
- d.* Iowa Electrical Safety Code, as defined in 199—Chapter 25.
- e.* National Electrical Code, ANSI/NFPA 70-2005.
- f.* IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems—IEEE 519-1992.
- g.* Standard for Interconnecting Distributed Resources with Electric Power Systems, ANSI/IEEE 1547-2003.

For those facilities which are of such design as to not be subject to the standards noted in paragraphs 15.10(1) “a” through “d,” data on the manufacturer, type of device, and output current wave form (at full load) and output voltage wave form (at no load and at full load) shall be submitted to the utility for review and approval prior to interconnection. A copy of the utility decision (whether approving or disapproving), including the data specified in paragraphs 15.10(1) “a” through “d” and the exact location of the facility, shall be filed with the board within one week of the date of the decision. The utility decision, or its failure to decide within a reasonable time, may be appealed to the board. The appeal shall be treated as a contested case proceeding.

**15.10(2) *Modifications required.*** Rescinded IAB 7/23/03, effective 8/27/03.

**15.10(3) *Interconnection facilities.*** Interconnections between qualifying facilities or AEP facilities and electric utility systems shall be equipped with devices, as set forth below, to protect either system from abnormalities or component failures that may occur within the facility or the electric utility system. Inclusion of the following protective systems shall be considered as a minimum standard of accepted good practice unless otherwise ordered by the board:

- a.* The interconnection must be provided with a switch that provides a visible break or opening. The switch must be capable of being padlocked in the open position.
- b.* The interconnection shall include overcurrent devices on the facility to automatically disconnect the facility at all currents that exceed the full-load current rating of the facility.
- c.* Facilities with a design capacity of 100 kilowatts or less must be equipped with automatic disconnection upon loss of electric utility-supplied voltage.
- d.* Those facilities that produce a terminal voltage prior to the closure of the interconnection shall be provided with synchronism-check devices to prevent closure of the interconnection under conditions other than a reasonable degree of synchronization between the voltages on each side of the interconnection switch.

**15.10(4) *Access.*** Both the operator of the qualifying facility or AEP facility and the utility shall have access to the interconnection switch at all times.

**15.10(5) *Inspections.*** The operator of the qualifying facility or AEP facility shall adopt a program of inspection of the generator and its appurtenances and the interconnection facilities in order to determine necessity for replacement and repair. Representatives of the utility shall have access at all reasonable hours to the interconnection equipment specified in subrule 15.10(3) for inspection and testing.

**15.10(6) *Emergency disconnection.*** In the event that an electric utility or its customers experience problems of a type that could be caused by the presence of alternating currents or voltages with a frequency higher than 60 Hertz, the utility shall be permitted to open and lock the interconnection switch pending a complete investigation of the problem. Where the utility believes the condition creates

a hazard to the public or to property, the disconnection may be made without prior notice. However, the utility shall notify the operator of the qualifying facility or AEP facility by written notice and, where possible, verbal notice as soon as practicable after the disconnections. If the facility and the utility are unable to agree on conditions for reconnection of the facility, a contested case proceeding to determine the conditions for reconnection may be commenced by the facility or the utility upon filing of a petition.